REMARKS

Applicant expresses appreciation to the Examiner for consideration of the subject patent application. This amendment is in response to the Office Action mailed June 4, 2004. Claims 22, 24, and 35 were objected to. Claims 5, 8, 9, 21, 23, 33, and 34 were rejected. The claims have been amended to address the concerns raised by the Examiner.

Claims 1-35 were originally presented. Claims 1-35 remain in the application. Claims 5, 8, and 33 have been amended to address concerns of the examiner.

The indication of allowable claims 1-4, 10-14, 17-20, and 25-32, and the indication of allowable subject matter in claims 22, 24, and 25, if rewritten in independent form, is acknowledged with appreciation.

Before discussing the specific amendments, it may be helpful to briefly review the invention, with particular reference to the particular embodiments illustrated in FIGS. 5-10 and exemplary claim 8, as amended. In reference to claim 8, a loudspeaker system includes an electroacoustical transducer and an enclosure which is divided into n subchambers by n-1 dividing walls. For example, a three subchamber loudspeaker is shown in FIGS. 5 – 9 and a four subchamber loudspeaker is shown in FIG. 10. The transducer is typically associated with the n1 chamber (21) and the n2 chamber (22), placed on a dividing wall between the two chambers. A key feature of the invention includes a primary passive acoustic radiator (34) which couples the n1 chamber to the n2 chamber. As claimed in claim 8, this is "at least one primary passive acoustic radiator ... intercoupling said first (n1) and second (n2) subchambers." Another unique feature of the present invention is that there is at least one secondary passive acoustic radiator which couples each subchamber other than the n1 subchamber to another subchamber. As claimed in claim 8, this is "at least one secondary passive acoustic radiator ... coupling each subchamber other than said first (n1) subchamber to another subchamber." In other words, the limitation allows a secondary passive radiator to be installed so that subchamber n2 intercouples with subchamber n3 (e.g., 30 in FIGS. 5 and 9), or multiple secondary passive radiators to be installed (e.g., 38, 39 in FIG. 10). Hence, each subchamber is coupled to at least one other subchamber.

Finally, the invention includes at least one tertiary passive acoustic radiator (31) which couples at least one of the subchambers (other than the n1 chamber) to the region outside the

loudspeaker. As claimed in claim 8, this is "at least one tertiary passive acoustic radiator ... intercoupling at least one of said subchambers, other than said first (n1) subchamber, to the region outside said enclosure." In other words, the limitation allows a tertiary passive radiator 31 to be installed so that a subchamber n2 is coupled through the enclosure to an outside region or with multiple radiators 31 and 33 communicating to the outside as in Figure 9. The combined use of secondary passive radiators (e.g., 38, 39 in FIG. 10) as well as multiple tertiary radiators (31 and 33 in FIG. 9) illustrates that multiple secondary and tertiary passive radiators may be present.

Claim Rejections - 35 U.S.C. § 112

Claims 5, 8, 9, and 33 stand rejected under § 112, 2nd paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In reference to claim 5, the Examiner suggested amending the claim to recite "a fourth passive acoustic radiator" to clarify the additional element introduced by claim 5. Applicant has amended claim 5 as suggested.

In reference to claim 8, the Examiner has characterized the language "coupling each subchamber other than said first (n1) subchamber to a region outside each subchamber is misdescriptive, since no means to couple adjacent subchambers for n>3 is disclosed. Applicant has amended claim 8 to clarify the language to what is believed to be equivalent language (non limiting) by changing references of "at least a first", "at least a second", and "at least a third" to read "at least one primary," "at least one secondary," and "at least one tertiary" in order to clarify that the references were not intended to identify a specific radiator, but were a designation of a class. In particular, a secondary radiator is any radiator which intercouples two chambers other than n1. A tertiary radiator is a radiator which couples a subchamber to an outside region (region outside the enclosure). Hence, multiple secondary and tertiary radiators may be provided. Applicant suggests that this clarification resolves the confusion raised by the Examiner.

In reference to claim 33, the Examiner notes that output of only one side of said vibratable diaphragm is filtered by all of said low pass acoustic filter structures. Applicant has amended claim 33 accordingly.

Applicant submits that claims 5, 8, and 33, as amended are now definite and requests reconsideration of these claims and dependent claim 9.

Claim Rejections - 35 U.S.C. § 102

Claims 21, 23, and 33 were rejected under 35 U.S.C. § 102(b) as being anticipated by Gawronski et al. (U.S. Patent No. 5,174,721, hereinafter "Gawronski").

In reference to claims 21 and 23, the Examiner has stated that Gawronski teaches a method for configuring a low-range speaker system, including the step of operating a low frequency passive acoustic radiator operating in parallel with said transducer.

Applicant submits that Gawronski fails to disclose operating a passive acoustic radiator in parallel with a transducer. In particular, FIG. 1 of Gawronski shows a transducer mounted between subchambers V1 and V2, passive radiator P1, mounted between subchamber V2 and V3, and passive radiator P2, mounted between subchambers V1 and V3. Hence, the transducer and passive radiators operate between *different* subchambers. In particular, the transducer operates between V1 and V2 and the passive radiators operate between V1 and V3, and V2 and V3. Accordingly, this configuration does not constitute a parallel arrangement.

In contrast, in the present invention, the transducer and passive acoustic radiator operate between the same regions. For example, FIG. 5 illustrates a transducer (13) and passive radiator (34) operating between region n1 (21) and n2 (22). In other words, the transducer and passive acoustic radio operate "in parallel" as claimed in claims 21 and 23. As this limitation is neither taught nor suggested by Gawronski, applicant respectfully submits that claims 21 and 23 are allowable for at least this reason and requests the Examiner withdraw the rejection

In reference to claim 33, the Examiner has stated that Gawronski teaches a method for configuring a low-range speaker system, including the step of configuring a transducer with a vibratable diaphragm for which all output of said vibratable diagraph is delivered to the region outside said low range speaker system is filtered by all of said low pass acoustic filter structures. Claim 33 has been amended, as discussed above, to more accurately claim the present invention, and as amended, applicant submits that Gawronski fails to teach the claimed limitation. In particular, as taught by Gawronski, output from the two sides of the transducer are filtered by different acoustic filter structures: one side by subchambers V1 and V3; the other side by

subchambers V2 and V3. Hence, Gawronski fails to teach the claimed limitation of "configuring a transducer with a vibratable diaphragm for which all output of one side of said vibratable diaphragm that is delivered to the region outside said low range speaker system is filtered by all of said low pass acoustic filter structures."

Claim 33 was also rejected under 35 U.S.C. § 102(b) as being anticipated by Schreiber et al. (U.S. Patent No. 5,092,424, hereinafter "Schreiber"). In reference to claim 33, the Examiner has stated that Schreiber teaches a method for configuring a low-range speaker system, including the step of configuring a transducer with a vibratable diaphragm for which all output of said vibratable diagraph is delivered to the region outside said low range speaker system is filtered by all of said low pass acoustic filter structures.

Claim 33 has been amended, as discussed above, to more accurately claim the present invention, and as amended, applicant submits that Schreiber fails to teach the claimed limitation. In particular, as taught by Schreiber, output from the two sides of the transducer are filtered by different acoustic filter structures: one side by subchambers V3, and the other side by V1 and V3. Hence, Schreiber fails to teach the claimed limitation of "configuring a transducer with a vibratable diaphragm for which all output of one side of said vibratable diaphragm that is delivered to the region outside said low range speaker system is filtered by all of said low pass acoustic filter structures."

As this limitation is neither taught nor suggested by Gawronski or Schreiber, applicant respectfully submits that claim 33 is allowable for at least these reasons and requests the Examiner withdraw the rejection.

As claim 34 depends from claim 33, applicant submits claim 33 is similarly allowable.

CONCLUSION

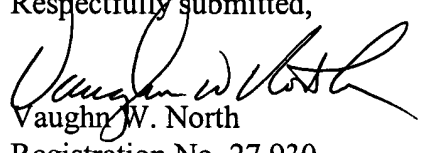
In light of the above, Applicant respectfully submits that pending claims 1-5, 8-14, 17-35 are now in condition for allowance. Therefore, Applicant requests that the rejections and objections be withdrawn, and that the claims be allowed and passed to issue. If any impediment to the allowance of these claims remains after entry of this Amendment, the Examiner is encouraged to call Vaughn North at (801) 566-6633 so that such matters may be resolved as expeditiously as possible.

Check No. 20441, in the amount of $55.00, is enclosed pursuant to 37 C.F.R. § 1.17(a), for a one month extension of time pursuant to 37 C.F.R. § 1.136 (a).

The Commissioner is hereby authorized to charge any additional fee or to credit any overpayment in connection with this Amendment to Deposit Account No. 20-0100.

DATED this 4th day of October, 2004.

Respectfully submitted,



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